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EXAMINER	
BROMELL, ALEXANDRIA Y	

ART UNIT	PAPER NUMBER
2167	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/563,610	ESKELINEN, EERO	
	Examiner	Art Unit	
	ALEXANDRIA Y. BROMELL	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 February 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 16, 31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 16, 31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 January 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's response to the restriction requirement dated October 28, 2008 has been considered and is persuasive. The restriction requirement has been withdrawn. An action on claims 1 – 31 is given below.

Claim Objections

Claim 4 is objected to under 37 CFR 1.75(c) as being in improper form because of a multiple dependent claim. See MPEP § 608.01(n).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 - 5, 7 - 8, 13 – 15, 17 – 23, 25 – 26, 28 – 29, and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Vineet Singh et al. (U.S. Patent 6,055,539), hereinafter, "Singh."

With respect to claim 1, Singh teaches receiving records containing several fields, the fields of which records containing values (i.e. records have fields with numeric and categorical values, (column 2, lines 1-9)), reading the values contained in at least two specified fields from each of the received records (i.e. Figure 1 has a record with three different fields, (column 2, lines 23-25)), selecting field-specifically ordered

classification structures corresponding to the specified fields, which field-specifically ordered classification structures comprise an own ordered classification structure for each of the specified fields in the received record (i.e. classification is built on field attributes for each record, (column 2, lines 1-9)), for each record: searching from the selected classification structures a set of suitable classes for each of the specified fields, wherein the suitable classes correspond to a value read from one of said fields (i.e. an intersection of the set of classes is formed, (column 3, lines 35-67)), forming an intersection set of the sets of suitable classes (i.e. a class is assigned to a record from intersection, (column 3, lines 54-67)), and selecting a class from the intersection set and assigning the selected class to the record, whereby said assigned class has been read from the field-specifically ordered classification structure (i.e. system selects class of record, column 2, lines 5 - 9).

With respect to claim 2, Singh teaches forming an intersection set comprises forming a set on the basis of the values of the fields, in such a way that a set of classes is formed for each field (i.e. sets formed from field values, (column 3, lines 45-50)), wherein said intersection set comprises a field specific set that incorporates service IDs, and a condition of a field used in the conditional statement of the class of which is true (i.e. service ID indicated T/F as low/high, (column 2, lines 23-36)), wherein selecting a class comprises selecting the class that appears in all of the sets, i.e. whose conditional statement is entirely true, (i.e. low risk true, (column 2, lines 23-36)).

With respect to claim 3, Singh teaches selecting a class further comprises using the accuracy principle to select the class, to which the record is selected, from the

classes corresponding to the reference value or reference values, in which case that is assigned, from of those corresponding to the reference value or reference values, which has the definition of which the greatest number of classification structure conditions are met (i.e. choose classification with highest number of classification conditions met, (column 2, lines 62-64)).

With respect to claim 4, Singh teaches selecting a class comprises selecting the class to which the record is assigned from the classes corresponding to a reference value or reference values, by applying an intersection or intersections and unions performed using logical operands (i.e. intersections and unions are performed using logical operands, or decision trees, (column 2, lines 10-22)).

With respect to claim 5, Singh teaches searching comprises using a search method that is faster than a sequential search, such as a binary search, a tree search, a hash search, and that the least comparisons are used to find the reference value according to the value (i.e. binary tree and has search used, (column 9, lines 59-67, and column 12, line 17)).

With respect to claim 7, Singh teaches that the fields are fields marked with a field ID (i.e. each record has a record ID, so the fields are characterized by their attribute and record ID, (column 3, lines 6-8)).

With respect to claim 8, Singh teaches that the fields contain values in various formats, such as numeric and symbolic values, and that there are specific classification structures for the various formats, and/or indicators to the classification structures (i.e.

numeric and categorical attribute values are placed in fields, and different classifiers are built based on those values, (column 2, lines 1-9)).

With respect to claim 13, Singh teaches that the names of the fields are set to form the entries of the table and for each field at least one operand-specific table according to at least one of the following operands is created, greater than (>), greater than or equal to (>=), less than , less than or equal to (=), equal to (=), and not equal to (!=) tables, so that a tree-like field-specific classification structure is created for each specified field (i.e. binary and decision tree classification structure are created for fields, (column 12, line 17, column 5, line 55)).

With respect to claim 14, Singh teaches that the intersection set includes more than one class and, of these classes, the class with the greatest accuracy is selected, which accuracy is defined on the basis of the number of fields used in the conditional statement of the class(i.e. choose classification with highest number of classification conditions met, (column 2, lines 62-64)) .

With respect to claim 15, Singh teaches that the intersection set is an empty set and the class is selected in such a way that a review is made of the statement with next lowest accuracy (i.e. intersection set is empty, (column 3, lines 52-53)).

With respect to claim 17, Singh teaches a classification system for records that is configured to receive records, the fields of which contain values (i.e. classification system receives records and fields, (column 2, lines 1-9, and column 3, lines 6-8)), and to select the records to classes characterized in that the classification structure contains a field-specific classification structure (i.e. records assigned to classes on basis of field

structure, (column 2, lines 1-9, and column 3, line 7)), and according to at least one specified field of the received records, logical operands are connected to the field-specific classification structure, the reference values used in the service-class definition suiting each operand relating to each defined field are arranged to form a separately ordered structure, classes suiting each reference value are connected to each ordered structure (i.e. logical operands convert classification rules used by decision trees and SQL statements, column 2, lines 20-26), the classification system is set to select, to a set class, the classification of a received record (i.e. system selects class of record, column 2, lines 5-9).

With respect to claim 18, Singh teaches a recorder that records the conditions of the classification structure (i.e. conditions of classes recorded in classification structure: low/high, true/false, (column 2, lines 24-36)).

With respect to claim 19, Singh teaches an operand specific ordered data structure that contains at least one service ID according to the reference value are recorded in an operand-specific ordered data structure (i.e. operand specific ordered data structure records reference value and service ID, figure 6).

With respect to claim 20, Singh teaches the classification structure further comprising a selection structure based on operands and a class division corresponding to the selections according to the structure (i.e. field classification system is based on class division, column 2, lines 20-23).

With respect to claim 21, Singh teaches that the classification system contains format-specific classification structures, or format-specific indicators to the classification structures (i.e. system contains format specific structures, column 2, lines 1-4).

With respect to claim 22, Singh teaches that the reference values in the field-specific classification structure are arranged as an ordered structure essentially in order of magnitude (i.e. references arranged by magnitude, column 2, lines 24-36).

With respect to claim 23, Singh teaches a field specific classification structures containing a plurality of separate classification structures, wherein the separate structures are separated on the basis of the form of the symbol used in the classification structure field, such as character-form or numeric (i.e. numeric and categorical attribute values are placed in fields, and different classifiers are built based on those values, (column 2, lines 1-9)).

With respect to claim 25, Singh teaches that the reference values are listed in order of magnitude and/or accuracy (i.e. references arranged by magnitude, column 2, lines 24-36).

With respect to claim 26, Singh teaches that it is arranged to search from the classification structure for the service class set for a received record (i.e. classification structure may be searched according to record, column 2, lines 1-9).

With respect to claim 28, Singh teaches that the fields are fields marked using a field identifier (i.e. each record has a record ID, so the fields are characterized by their attribute and record ID, (column 3, lines 6-8)).

With respect to claim 29, Singh teaches that values with different formats, such as numeric and symbolic values, are set in the fields and there are specific classifications structures and/or indicators to classification structures for the different formats (i.e. fields with numerical values and categorical values are part of classification structure, column 2, lines 1-9).

With respect to claim 31, Singh teaches receiving records containing several fields, the fields of which records containing values (i.e. records have fields with numeric and categorical values, (column 2, lines 1-9)), reading the values contained in at least two specified fields from each of the received records (i.e. Figure 1 has a record with three different fields, (column 2, lines 23-25)), selecting field-specifically ordered classification structures corresponding to the specified fields, which field-specifically ordered classification structures comprise an own ordered classification structure for each of the specified fields in the received record (i.e. classification is built on field attributes for each record, (column 2, lines 1-9)), for each record: searching from the selected classification structures a set of suitable classes for each of the specified fields, wherein the suitable classes correspond to a value read from one of said fields (i.e. an intersection of the set of classes is formed, (column 3, lines 35-67)), forming an intersection set of the sets of suitable classes (i.e. a class is assigned to a record from intersection, (column 3, lines 54-67)), and selecting a class from the intersection set and assigning the selected class to the record, whereby said assigned class has been read from the field-specifically ordered classification structure (i.e. system selects class of record, column 2, lines 5 - 9).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 6, 9 – 12, 16, 24, 27, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vineet Singh et al. (U.S. Patent 6,055,539), hereinafter, "Singh," in view of Moshe Zolotov (U.S. Patent 6,731,730), hereinafter, "Zolotov."

With respect to claim 6, Singh teaches a system for classification built on field values and attributes, (column 2, lines 1-9.) Singh does not explicitly disclose that the records received are formed on the basis of the properties of the telecommunications connections.

However, Zolotov teaches that the records received are formed on the basis of the properties of the telecommunications connections (i.e. records are based on telecommunication connections, column 5, lines 21-40).

Singh and Zolotov are analogous art because they are from the same field of endeavor of building and accessing a classified database. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the teaching of Singh with the teaching of Zolotov in order to use the telecommunication classification as part of the CDR database system, (Zolotov, column 5, lines 22-40). The motivation

for doing so would have been to provide a system for building combined CDR databases for use in telecommunication networks, (Zolotov, column 2, lines 10-17)).

With respect to claim 9, Singh teaches a system for classification built on field values and attributes, (column 2, lines 1-9.) Singh does not explicitly disclose that the classes to which the records are selected are service classes of billable telecommunications services, or a call, and/or types of telecommunications connections.

However, Zolotov teaches that the classes to which the records are selected are service classes of billable telecommunications services, or a call, and/or types of telecommunications connections (i.e. the CDR, or combined call detail record database, contains billing data for telecommunication system, column 4, lines 15-18).

Singh and Zolotov are analogous art because they are from the same field of endeavor of building and accessing a classified database. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the teaching of Singh with the teaching of Zolotov in order to use the telecommunication classification as part of the CDR database system, (Zolotov, column 5, lines 22-40). The motivation for doing so would have been to provide a system for building combined CDR databases for use in telecommunication networks, (Zolotov, column 2, lines 10-17)).

With respect to claim 10, Singh teaches a system for classification built on field values and attributes, (column 2, lines 1-9.) Singh does not explicitly disclose that the classes, to which the records are selected, are separated on the basis of conditions relating to the properties of telecommunications connections.

However, Zolotov teaches that the classes, to which the records are selected, are separated on the basis of conditions relating to the properties of telecommunications connections (i.e. type of telecommunication connection separates the records in classification, column 5, lines 21-40).

Singh and Zolotov are analogous art because they are from the same field of endeavor of building and accessing a classified database. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the teaching of Singh with the teaching of Zolotov in order to use the telecommunication classification as part of the CDR database system, (Zolotov, column 5, lines 22-40). The motivation for doing so would have been to provide a system for building combined CDR databases for use in telecommunication networks, (Zolotov, column 2, lines 10-17)).

With respect to claim 11, Singh teaches a system for classification built on field values and attributes, (column 2, lines 1-9.) Singh does not explicitly disclose that one field identifier corresponds to a field depicting the duration in time of a billable telecommunications connection and/or a field depicting the volume and/or speed of the data transmitted over a billable telecommunications connection.

However, Zolotov teaches that one field identifier corresponds to a field depicting the duration in time of a billable telecommunications connection and/or a field depicting the volume and/or speed of the data transmitted over a billable telecommunications connection (i.e. duration of a call is a field in the CDR, column 6, lines 26-44).

Singh and Zolotov are analogous art because they are from the same field of endeavor of building and accessing a classified database. At the time of the invention, it

would have been obvious to one of ordinary skill in the art to modify the teaching of Singh with the teaching of Zolotov in order to use the telecommunication classification as part of the CDR database system, (Zolotov, column 5, lines 22-40). The motivation for doing so would have been to provide a system for building combined CDR databases for use in telecommunication networks, (Zolotov, column 2, lines 10-17)).

With respect to claim 12, Singh teaches a system for classification built on field values and attributes, (column 2, lines 1-9.) Singh does not explicitly disclose that the record is a telecommunications network event description record, such as a CDR, ER, IPDR, or UDR.

However, Zolotov teaches that the record is a telecommunications network event description record, such as a CDR, ER, IPDR, or UDR (i.e. record is a Combined Call Detail Record database (CDR) in a management telecommunications network, (abstract)).

Singh and Zolotov are analogous art because they are from the same field of endeavor of building and accessing a classified database. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the teaching of Singh with the teaching of Zolotov in order to use the telecommunication classification as part of the CDR database system, (Zolotov, column 5, lines 22-40). The motivation for doing so would have been to provide a system for building combined CDR databases for use in telecommunication networks, (Zolotov, column 2, lines 10-17)).

With respect to claim 16, Singh teaches a system for classification built on field values and attributes, (column 2, lines 1-9.) Singh does not explicitly disclose that it is performed in a mediator system of a telecommunications network.

However, Zolotov teaches that it is performed in a mediator system of a telecommunications network (i.e. mediator collects data from network elements in a telecommunications network, column 5, lines 41-50).

Singh and Zolotov are analogous art because they are from the same field of endeavor of building and accessing a classified database. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the teaching of Singh with the teaching of Zolotov in order to use the telecommunication classification as part of the CDR database system, (Zolotov, column 5, lines 22-40). The motivation for doing so would have been to provide a system for building combined CDR databases for use in telecommunication networks, (Zolotov, column 2, lines 10-17)).

With respect to claim 24, Singh teaches a system for classification built on field values and attributes, (column 2, lines 1-9.) Singh does not explicitly disclose that the field identifier is arranged to correspond to the field depicting the data-transfer capacity of a billable telecommunications connection.

However, Zolotov teaches that the field identifier is arranged to correspond to the field depicting the data-transfer capacity of a billable telecommunications connection (i.e. duration of a call is a field in the CDR, column 6, lines 26-44).

Singh and Zolotov are analogous art because they are from the same field of endeavor of building and accessing a classified database. At the time of the invention, it

would have been obvious to one of ordinary skill in the art to modify the teaching of Singh with the teaching of Zolotov in order to use the telecommunication classification as part of the CDR database system, (Zolotov, column 5, lines 22-40). The motivation for doing so would have been to provide a system for building combined CDR databases for use in telecommunication networks, (Zolotov, column 2, lines 10-17)).

With respect to claim 27, Singh teaches a system for classification built on field values and attributes, (column 2, lines 1-9.) Singh does not explicitly disclose that it is arranged to operate in a mediator system of a telecommunications network.

However, Zolotov teaches that it is arranged to operate in a mediator system of a telecommunications network (i.e. mediator collects data from network elements in a telecommunications network, column 5, lines 41-50).

Singh and Zolotov are analogous art because they are from the same field of endeavor of building and accessing a classified database. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the teaching of Singh with the teaching of Zolotov in order to use the telecommunication classification as part of the CDR database system, (Zolotov, column 5, lines 22-40). The motivation for doing so would have been to provide a system for building combined CDR databases for use in telecommunication networks, (Zolotov, column 2, lines 10-17)).

With respect to claim 30, Singh teaches a system for classification built on field values and attributes, (column 2, lines 1-9.) Singh does not explicitly disclose teaches that at least one field identifier corresponds to a field depicting the duration in time of a

billable telecommunications connection and/or a field depicting the volume and/or rate of data transmitted on a billable telecommunications connection.

However, Zolotov teaches that at least one field identifier corresponds to a field depicting the duration in time of a billable telecommunications connection and/or a field depicting the volume and/or rate of data transmitted on a billable telecommunications connection (i.e. duration of a call is a field in the CDR, column 6, lines 26-44).

Singh and Zolotov are analogous art because they are from the same field of endeavor of building and accessing a classified database. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the teaching of Singh with the teaching of Zolotov in order to use the telecommunication classification as part of the CDR database system, (Zolotov, column 5, lines 22-40). The motivation for doing so would have been to provide a system for building combined CDR databases for use in telecommunication networks, (Zolotov, column 2, lines 10-17).

Conclusion/Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEXANDRIA Y. BROMELL whose telephone number is (571)270-3034. The examiner can normally be reached on M - R 9 - 3.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alexandria Y Bromell/
Examiner, Art Unit 2167
April 30, 2009

/S. A. A./
Primary Examiner, Art Unit 2162

/John R. Cottingham/
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